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The Relationship Between Hypermobile Joints and Tendonitis

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Hypermobility is the generalized term when joints have a larger range of motion (ROM) than normal. This can be impacted by age, gender, and ethnic background. Ehlers-Danlos Syndrome hypermobility type (EDS-HT or EDS) is a subcategory of hypermobility caused by a genetic disorder that impacts joints, skin, and blood vessels.

Hypermobility and EDS-HT are both diagnosed on the Beighton scale which is a numerical mobility score of 0-9, with nine categories. The thumb, pinky, elbow, knee, and trunk are assessed for abnormal ROM and one point is awarded for each abnormal score. Scores 5 and above are considered hypermobile.

Tendonitis is the inflammation of a tendon, that occurs mostly from overuse, but can also be caused from infection and rheumatic infection. Tendonitis can be diagnosed from blood tests, MRI or the Finkelstein test.

1Ask: Research Question

What is the association between joint hypermobility and tendonitis?

2aAcquire: Search Terms

Databases used: PubMed, ProQuest, Cochrane Library, ClincalKey, and Scopus

Search terms: EDS/HT-EDS, Ehlers-Danlos Syndrome, Hypermobility, Joint Hypermobility Syndrome, Hypermobility Type Ehlers-Danlos Syndrome, & Tendonitis

2bAcquire: Selected Articles

Castori, Sperduti, Celletti, Camerota, & Grammatico (2011): Descriptive mixed method study examined patients with EDS to document the progression of symptoms and severity by age and gender in joint hypermobility syndrome.

Rombaut, Malfait, Cools, Paepe, & Calders (2010): Case control with healthy subjects investigated the differences of musculoskeletal complains, physical activity, and health related quality of life in the women.

Hudson, Fitzcharles, Cohen, Starr, & Esdaile (1998). Descriptive mixed method examining mobility and physical activity in participants with Soft-Tissue Rheumatism (STR) and hypermobility.

3aAppraise: Study Quality

Castori et al., 2011 : Study Level: (III) (n=50).
Strengths include the involvement of both genders. A clear age and gender prevalence of tendonitis was examined.
Limitations include those over the age of 65 were excluded which does not allow for a full picture of disease-specific symptom prevalence through the lifespan.

Rombaut et al., 2010: Study Level: (III) (n=64).
Strengths include defined inclusion criteria and concluded that occupational therapy could benefit participants physical and social ADLs.
Limitations include a sample consisting of only women and 5 of the 32 EDS participants did not answer every question completely.

Hudson et al, 1998 Study Level:(III) (n=29)
Strengths include a large range of participant age (16-70), the usage of blind data collection, and the collection of data on all joints
Limitations of this study include, the age of the study and all STR conditions were examined together, never examining tendonitis independently.

3bAppraise: Study Results

Castori et al., 2011: Participants self reported symptoms related to joint hypermobility, including tendonitis. Of the 50 participants, 31 reported at least one occurrence of tendonitis**.** Women have an earlier age of onset of tendonitis (26) than males (31).

Rombaut et al., 2010: Of the 32 participants with EDS, 7 (25.9%) reported tendonitis as a musculoskeletal complaint (p=.010). The control group participants were significantly more physically active (p=.027). Participants with EDS had a lower quality of life than the control in almost every category, including physical functioning, social functioning, and bodily pain (p<.001).

Hudson et al, 1998: Participants diagnosed with hypermobile joints were more likely than their controls to report at least one occurrence of a soft tissue rheumatism (STR) condition: which includes tendonitis, bursitis, fasciitis, and fibromyalgia with 90% of the joint hypermobile group reporting at least one episode compared to 51% of the control (p<.001). The hypermobile group was more likely to have experienced recurrent episodes: 69% vs 38%, (p<.001). Participants with joint hypermobility reported more exposure to repetitive activities, such as keyboard typing at 48% vs the control groups at 21%, (p<.05).

4Apply: Conclusions for Practice

There is a relationship between hypermobility/EDS and tendonitis. Those who have been diagnosed with hypermobility or EDS are at a higher risk of developing tendonitis, especially for those who participate in repetitive actions. Occupational Therapists can educate clients who have high risk occupations such as factory workers and typists of the importance of ergonomic positioning, energy conservation, and joint protection.

References

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Yes, there is an association between joint hypermobility and tendonitis.